

REMARKS

Claims 1-8, 18, and 21-23 are pending in this application. By this Amendment, claims 1 and 21 are amended. Claim 23 is added. The amendments to the claims and the added claim introduce no new matter. Reconsideration of the application based on the above amendments and the following remarks is respectfully requested.

The Office Action, in paragraph 2, rejects claims 1-3, 8 and 22 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,966,193 to Zhang et al. (hereinafter "Zhang"). The Office Action, in paragraph 4, rejects claims 5-7, 18 and 21 under 35 U.S.C. §103(a) as being unpatentable over Zhang as applied to the above enumerated claims, and further in view of U.S. Patent No. 6,885,417 to Murade and U.S. Patent No. 6,781,651 to Song et al. (hereinafter "Song"). These rejections are respectfully traversed.

Zhang, as referenced by the Office Action, teaches a light shield patterning on a TFT substrate for an active matrix liquid crystal display device (Abstract). With reference to Fig. 7D of Zhang, the Office Action attempts to map features disclosed in Zhang to features recited in the pending claims. The analysis of the Office Action fails for at least the following reasons.

Claims 1 and 21 recite, among other features, a storage capacitor electrically connected to the thin film transistor and the pixel electrode, the storage capacitor being disposed above the substrate and below the pixel electrode; and a shielding layer disposed above the data line and below the pixel electrode, a titanium nitride film being included in the shielding layer and being formed along a data line and wider than the data line.

The allegedly corresponding nitride film 82 of Zhang is described as a 5,000 Å thick silicon oxide film which functions as a second interlayer insulator, silicon nitride being interchangeable for silicon oxide (Col. 8, lines 7-10 of Zhang). Zhang, therefore, does not disclose a titanium nitride film, as is positively recited in the subject matter of independent

claims 1 and 21. Titanium nitride employed in the subject matter of the pending claims because it is completely opaque, providing much better light shielding properties than the semi-opaque silicon nitride film disclosed in Zhang.

Further, the analysis of the Office Action fails where it asserts that storage capacitors, not specifically shown in the depicted and/or disclosed structure of Zhang, are inherently formed between the shielding layer and the pixel electrode, and/or between the data line and the shielding layer. Specifically, the Office Action points to no specific structural element disclosed in Zhang that corresponds, or is alleged to correspond, to the storage capacitor positively recited in the claims. The Office Action apparently relies on disclosure in, for example, the Abstract of Zhang that "[a] capacitance is formed by the light-shield film and at least a part of the semiconductor layer with an insulating layer interposed therebetween." Regarding at least the claim of inherency, the analysis of the Office Action is deficient.

Rejections under 35 U.S.C. §102 must be based on the single reference teaching every aspect of the claimed invention either explicitly or impliedly. Any feature not directly taught must be inherently present. The Office Action asserts that storage capacitors electrically connected to the thin film transistor and the pixel electrode are inherent, citing no specific structure which the Office Action alleges corresponds to the storage capacitors specifically depicted and disclosed in Applicants' disclosure, and positively recited in the claims. With reference to MPEP §2112, Applicants must be provided with rationale or evidence tending to show inherency. Inherency "may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstance is not sufficient." Whenever an Examiner relies on a theory of inherency, the Examiner "must provide a basis in fact and/or technical reasoning to reasonably support the determination that the alleged inherent characteristic necessarily flows from the teachings of the applied prior art." Applicants do not believe that this standard has been met in this case where there is an

assertion that a capacitance exists and this is considered to correspond to the positive recitation of a storage capacitor in the claims.

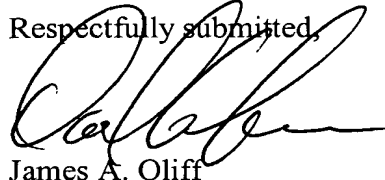
For at least the above reasons, Zhang cannot reasonably be considered to teach, or to have suggested, the combinations of all of the features recited in independent claims 1 and 21. Further, because Murade and Song are not relied upon as disclosing the above referenced features in the independent claims, the application of these references does not overcome any shortfall in the application of Zhang to the subject matter recited in independent claims 1 and 21. Additionally, claims 2-8 and 18 are also neither taught, nor can they reasonably be considered to have been suggested, by Zhang, or Zhang in combination with the other applied references, for at least the respective dependence of these claims directly or indirectly on independent claim 1, as well as for the separately patentable subject matter that each of these claims recites.

Accordingly, reconsideration and withdrawal of the rejections of claims 1-8, 18, 21 and 22 under 35 U.S.C. §102(b) as being anticipated by Zhang, or under 35 U.S.C. §103(a) as being unpatentable over any combination of Zhang and the other applied references, are respectfully requested.

In view of the foregoing, Applicants respectfully submit that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-8, 18, and 21-23 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact Applicants' undersigned representative at the telephone number set forth below.

Respectfully submitted,



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